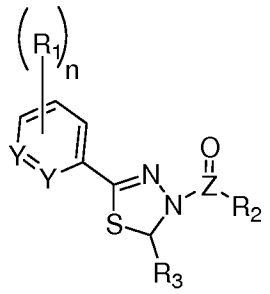
Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application:

Listing of claims:

Claim 1. (Currently amended) A compound of Formula I:



(I)

in which

n is selected from ~~0,~~ 1, 2 and 3;

Z is selected from C and S(O); each

Y is independently selected from $-CR_4=$ ~~and —N=~~;

wherein R_4 is selected from hydrogen, cyano, hydroxyl, C_{1-6}alkyl, C_{1-6}alkoxy, halo-substituted-C_{1-6}alkyl and halo-substituted-C_{1-6}alkoxy;

R_1 is selected from halo, cyano, hydroxyl, C_{1-6}alkyl, C_{1-6}alkoxy, halo-substituted-C_{1-6}alkyl, halo-substituted-C_{1-6}alkoxy and $-C(O)OR_4$; wherein R_4 is ~~as described above~~ selected from hydrogen, cyano, hydroxyl, C_{1-6}alkyl, C_{1-6}alkoxy, halo-substituted-C_{1-6}alkyl and halo-substituted-C_{1-6}alkoxy;

R_2 is selected from C_{6-10}aryl, ~~C_{5-10}heteroaryl,~~ and C_{3-12}cycloalkyl ~~and C_{3-8}heterocycloalkyl~~; wherein any aryl, ~~heteroaryl~~, or cycloalkyl ~~or heterocycloalkyl~~ of R_2 is optionally substituted with 1 to 5 radicals independently selected from halo, hydroxy, cyano, nitro, C_{1-6}alkyl, C_{1-6}alkoxy, halo-substituted-C_{1-6}alkyl, halo-substituted-C_{1-6}alkoxy, $-C(O)NR_5R_5$, $-OR_5$, $-OC(O)R_5$, $-NR_5R_6$, $-C(O)R_5$ and $-NR_5C(O)R_5$;

wherein:

R_5 and R_6 are independently selected from hydrogen, C_{1-6}alkyl, C_{1-6}alkoxy, halo-substituted-C_{1-6}alkyl, halo-substituted-C_{1-6}alkoxy, C_{6-10}aryl-C_{0-4}alkyl, ~~C_{3-8}heteroaryl-C_{0-4}alkyl,~~ and C_{3-12}cycloalkyl-C_{0-4}alkyl ~~and C_{3-8}heterocycloalkyl-C_{0-4}alkyl; or R_5 and R_6 together with the nitrogen atom to which R_5 and R_6 are attached form C_{5-10}heteroaryl or C_{3-8}heterocycloalkyl~~; wherein any aryl, ~~heteroaryl,~~ or cycloalkyl ~~or heterocycloalkyl~~ of R_5 ~~or the combination of R_5 and R_6~~ is optionally substituted with 1 to 4 radicals independently selected from halo, hydroxy, cyano, nitro, C_{1-6}alkyl, C_{1-6}alkoxy, halo-substituted-C_{1-6}alkyl and halo-substituted-C_{1-6}alkoxy;

R_3 is selected from C_{6-10}aryl, ~~C_{5-10}heteroaryl,~~ and C_{3-12}cycloalkyl ~~and C_{3-8}heterocycloalkyl~~; wherein any aryl, ~~heteroaryl,~~ or cycloalkyl ~~or heterocycloalkyl~~ of R_3 is substituted with 1 to 5 radicals independently selected from halo, C_{1-6}alkoxy, halo-substituted-C_{1-6}alkyl, halo-substituted-C_{1-6}alkoxy, -OXR_7, -$OXC(O)NR_7R_8$, -$OXC(O)NR_7XC(O)OR_8$, -$OXC(O)NR_7XOR_8$, -$OXC(O)NR_7XNR_7R_8$, -$OXC(O)NR_7XS(O)_{0-2}R_8$, -$OXC(O)NR_7XNR_7C(O)R_8$, -$OXC(O)NR_7XC(O)XC(O)OR_8$, -$OXC(O)NR_7R_9$, -$OXC(O)OR_7$, -$OXOR_7$, -OXR_9, -XR_9, -$OXC(O)R_9$, -$OXS(O)_{0-2}R_9$ and -$OXC(O)NR_7CR_7[C(O)R_8]_2$;

wherein:

X is a selected from a bond and C_{1-6}alkylene wherein any methylene of X can optionally be replaced with a divalent radical selected from C(O), NR_7, $S(O)_2$ and O;

R_7 and R_8 are independently selected from hydrogen, cyano, C_{1-6}alkyl, halo-substituted-C_{1-6}alkyl, C_{2-6}alkenyl and C_{3-12}cycloalkyl-C_{0-4}alkyl;

R_9 is selected from C_{6-10}aryl-C_{0-4}alkyl, ~~C_{5-10}heteroaryl-C_{0-4}alkyl,~~ and C_{3-12}cycloalkyl-C_{0-4}alkyl ~~and C_{3-8}heterocycloalkyl-C_{0-4}alkyl~~; wherein any alkyl of R_9 can have a hydrogen replaced with –$C(O)OR_{10}$; and any aryl, ~~heteroaryl,~~ or cycloalkyl ~~or heterocycloalkyl~~ of R_9 is optionally substituted with 1 to 4 radicals independently selected from halo, C_{1-6}alkyl, C_{3-12}cycloalkyl, halo-substituted-C_{1-6}alkyl, C_{1-6}alkoxy,

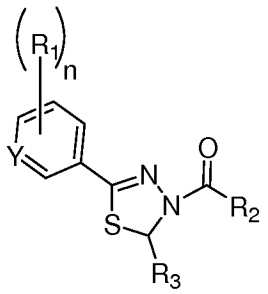
halo-substituted-C_{1-6}alkoxy, -$XC(O)OR_{10}$, -$XC(O)R_{10}$, -$XC(O)NR_{10}R_{10}$, -$XS(O)_{0-2}NR_{10}R_{10}$ and -$XS(O)_{0-2}R_{10}$;

wherein:

R_{10} is independently selected from hydrogen and C_{1-6}alkyl;

and the pharmaceutically acceptable salts, hydrates, solvates and isomers thereof.

Claim 2. (Currently amended) The compound of claim 1 of Formula Ia:



(Ia)

in which

n is selected from 1, 2 and 3;

Y is selected from –CH= ~~and –N=~~;

R_1 is selected from halo, C_{1-6}alkyl, and –$C(O)OR_4$; wherein R_4 is selected from hydrogen and C_{1-6}alkyl;

R_2 is selected from C_{6-10}aryl, ~~C_{5-10}heteroaryl,~~ and C_{3-12}cycloalkyl ~~and C_{3-8}heterocycloalkyl~~; wherein any aryl, ~~heteroaryl,~~ or cycloalkyl ~~or heterocycloalkyl~~ of R_2 is optionally substituted with 1 to 4 radicals independently selected from halo, hydroxy, C_{1-6}alkyl, halo-substituted-C_{1-6}alkyl and –$OC(O)R_5$; wherein R_5 is selected from hydrogen and C_{1-6}alkyl; and

R_3 is selected from C_{6-10}aryl, ~~C_{5-10}heteroaryl,~~ and C_{3-12}cycloalkyl ~~and C_{3-8}heterocycloalkyl~~; wherein any aryl, ~~heteroaryl,~~ or cycloalkyl ~~or heterocycloalkyl~~ of R_3 is substituted with 1 to 5 radicals independently selected from halo, hydroxyl, C_{1-6}alkoxy, halo-substituted-C_{1-6}alkyl, halo-substituted-C_{1-6}alkoxy, -OXR_7, -$OXC(O)NR_7R_8$, -$OXC(O)NR_7XC(O)OR_8$, -$OXC(O)NR_7XOR_8$, -$OXC(O)NR_7XNR_7R_8$, -$OXC(O)NR_7XS(O)_{0-2}R_8$, -$OXC(O)NR_7XNR_7C(O)R_8$,

$-OXC(O)NR_7XC(O)XC(O)OR_8$, $-OXC(O)NR_7R_9$, $-OXC(O)OR_7$, $-OXOR_7$, $-OXR_9$, $-XR_9$, $-OXC(O)R_9$ and $-OXC(O)NR_7CR_7[C(O)R_8]_2$;

wherein

X is a selected from a bond and C_{1-6}alkylene;

R_7 and R_8 are independently selected from hydrogen, cyano, C_{1-6}alkyl, halo-substituted-C_{1-6}alkyl, C_{2-6}alkenyl and C_{3-12}cycloalkyl-C_{0-4}alkyl;

R_9 is selected from C_{6-10}aryl-C_{0-4}alkyl, ~~C_{5-10}heteroaryl-C_{0-4}alkyl~~, and C_{3-12}cycloalkyl-C_{0-4}alkyl ~~and C_{3-8}heterocycloalkyl-C_{0-4}alkyl~~; wherein any alkyl of R_9 can have a hydrogen replaced with $-C(O)OR_{10}$; and any aryl, ~~heteroaryl,~~ or cycloalkyl ~~or heterocycloalkyl~~ of R_9 is optionally substituted with 1 to 4 radicals independently selected from halo, C_{1-6}alkyl, C_{3-12}cycloalkyl, halo-substituted-C_{1-6}alkyl, C_{1-6}alkoxy, halo-substituted-C_{1-6}alkoxy, $-XC(O)OR_{10}$, $-XC(O)R_{10}$, $-CR_{10}(NR_{10}R_{10})=NOR_{10}$, $-XC(O)NR_{10}R_{10}$, $-XS(O)_{0-2}NR_{10}R_{10}$ and $-XS(O)_{0-2}R_{10}$;

wherein

R_{10} is independently selected from hydrogen and C_{1-6}alkyl.

Claim 3. (Currently amended) The compound of claim 2 in which

R_1 is selected from fluoro, chloro, methyl and $-C(O)OCH_3$; and

R_2 is selected from phenyl, cyclohexyl, cyclopentyl, ~~pyrrolyl, pyrazolyl,~~ and naphthyl, ~~benzo[1,3]dioxolyl, thienyl, furanyl and pyridinyl~~; wherein any aryl, ~~heteroaryl~~ or cycloalkyl of R_2 is optionally substituted with 1 to 4 radicals independently selected from fluoro, chloro, bromo, hydroxy, methyl, ethyl, propyl, t-butyl, amino, dimethyl-amino, methoxy, trifluoromethyl, trifluoromethoxy and $-OC(O)CH_3$.

Claim 4. (Currently amended) The compound of claim 3 in which R_3 is ~~selected from~~ phenyl, ~~benzo[1,3]dioxolyl, pyridinyl, 2,2-difluoro-benzo[1,3]dioxol-5-yl and benzooxazolyl; wherein any aryl or heteroaryl of R_3 is~~ substituted with 1 to 5 radicals independently selected from fluoro, chloro, bromo, methoxy, hydroxyl, difluoromethoxy, $-OCH_2C(O)NH_2$, $-OCH_2C(O)OCH_3$, $-OCH_2C(O)NHCH_3$, $-OCH_2C(O)N(CH_3)_2$, $-R_9$, $-OR_9$, $-OCH_2R_9$, $-OCH_2C(O)R_9$,

$-OCH_2C(O)NHR_9$, $-OCH_2C(O)N(CH_3)R_9$, $-OCH_2C(O)NHCH_2R_9$, $-OCH_2CN$, $-OCH_2C_2H_3$, $-OCH_2C_2H_4$, $-O(CH_2)_2OH$, $-OCH_2C(O)NH(CH_2)_2C(O)OC_2H_5$, $-OCH_2C(O)NH(CH_2)_2CH_2F$, $-OCH_2C(O)NHCH_2CH_2F$, $-OCH_2C(O)NH(CH_2)_2C(O)OH$, $-OCH_2C(O)NHCH(CH_2R_9)C(O)OC_2H_5$, $-OCH_2C(O)NHC(O)(CH_2)_2C(O)OCH_3$, $-OCH_2C(O)NH(CH_2)_2NHC(O)CH_3$, $-OCH_2C(O)NHCH_2C(O)C_2H_5$, $-OCH_2C(O)NH(CH_2)_2C(O)OC_4H_9$, $-OCH_2C(O)NHCH_2C(O)OC_2H_5$, $-OCH_2C(O)NHCH[C(O)OC_2H_5]_2$, $-S(O)_2CH_3$, $-OCH_2C(O)NHCH_2CF_3$, $-OCH_2C(O)NHCH_2C(O)(CH_2)_2C(O)OCH_3$, $-OCH_2C(O)N(CH_3)CH_2C(O)OCH_3$, $-OCH_2C(O)NH(CH_2)_3OC_2H_5$, $-OCH_2C(O)NH(CH_2)_3OCH(CH_3)_2$, $-OCH_2C(O)NH(CH_2)_2SCH_3$, $-OCH_2C(O)NHCH_2CH(CH_3)_2$, $-OCH_2C(O)NHCH(CH_3)CH_2OH$, $-OCH_2C(O)NHCH_2CH(CH_3)C_2H_5$, $-OCH_2C(O)NHCH(CH_3)C(O)OC_2H_5$, $-OCH_2C(O)NHCH_2CH(CH_3)_2$ and $-OCH_2C(O)(CH_2)_3OCH(CH_3)_2$;

wherein

R_9 is phenyl, cyclopropyl-methyl, ~~isoxazolyl, benzthiazolyl, furanyl, furanyl-methyl, tetrahydro-furanyl, pyridinyl, 4-oxo-4,5-dihydro-thiazol-2-yl, pyrazolyl, isothiazolyl, 1,3,4-thiadiazolyl, thiazolyl~~, phenethyl, ~~morpholino, morpholino-propyl, isoxazolyl-methyl, pyrimidinyl, tetrahydro-pyranyl, 2-oxo-2,3-dihydro-pyrimidin-4-yl, piperazinyl, pyrrolyl, piperidinyl, pyrazinyl, imidazolyl, imidazolyl-propyl, benzo[1,3]dioxolyl, benzo[1,3]dioxolyl-propyl, 2-oxo-pyrrolidin-1-yl and 2-oxo-pyrrolidin-1-yl-propyl~~; wherein any alkyl of R_9 can have a hydrogen replaced with $-C(O)OC_2H_5$; wherein any aryl, ~~heteroaryl or heterocycloalkyl~~ of R_9 is optionally substituted with 1 to 4 radicals independently selected from methyl, ethyl, cyclopropyl, methoxy, trifluoromethyl, $-OC(O)CH_3$, -COOH, $-S(O)_2NH_2$, $-CH(NH_2)=NOH$, $-C(O)OC_2H_5$, $-CH_2C(O)OH$, $-CH_2C(O)OC_2H_5$, $-CH_2C(O)OCH_3$, $-C(O)OCH_3$, $-C(O)NH_2$, $-C(O)NHCH_3$ and $-C(O)CH_3$.

Claim 5. (Original) A pharmaceutical composition comprising a therapeutically effective amount of a compound of Claim 1 in combination with a pharmaceutically acceptable excipient.

Claim 6. (Withdrawn) A method for treating a disease or disorder in an animal in which modulation of LXR activity can prevent, inhibit or ameliorate the pathology and/or symptomatology of the disease, which method comprises administering to the animal a therapeutically effective amount of a compound of Claim 1.

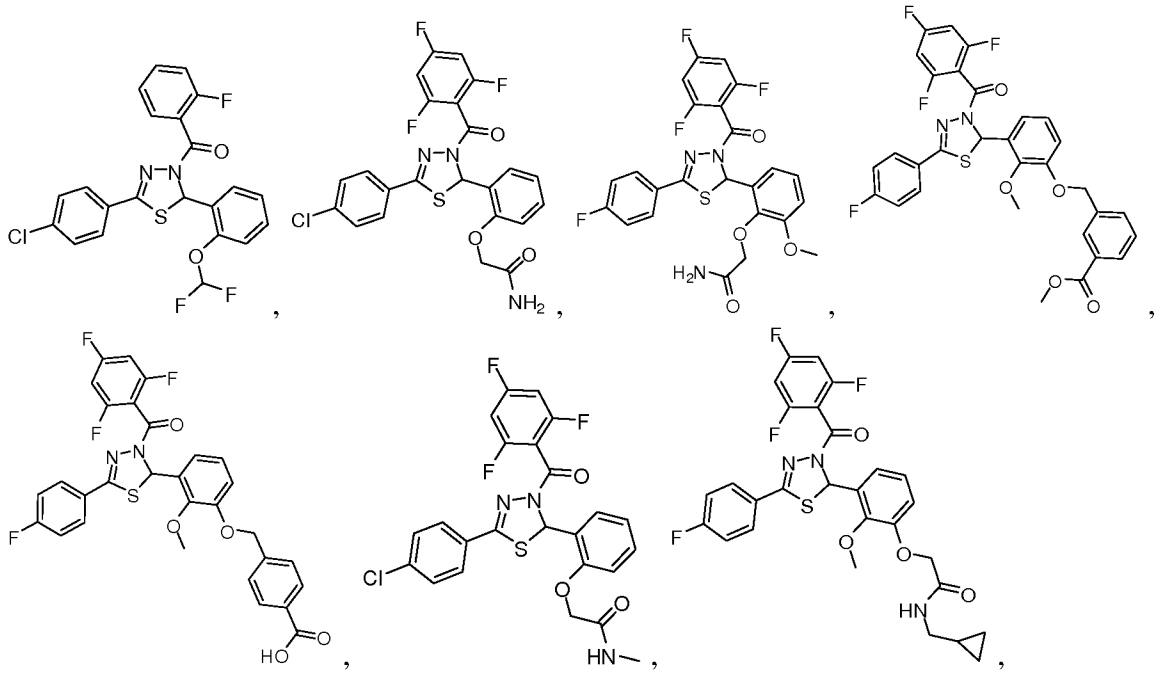
Claim 7. (Withdrawn) The method of claim 6 wherein the diseases or disorder are selected from cardiovascular disease, diabetes, neurodegenerative diseases and inflammation.

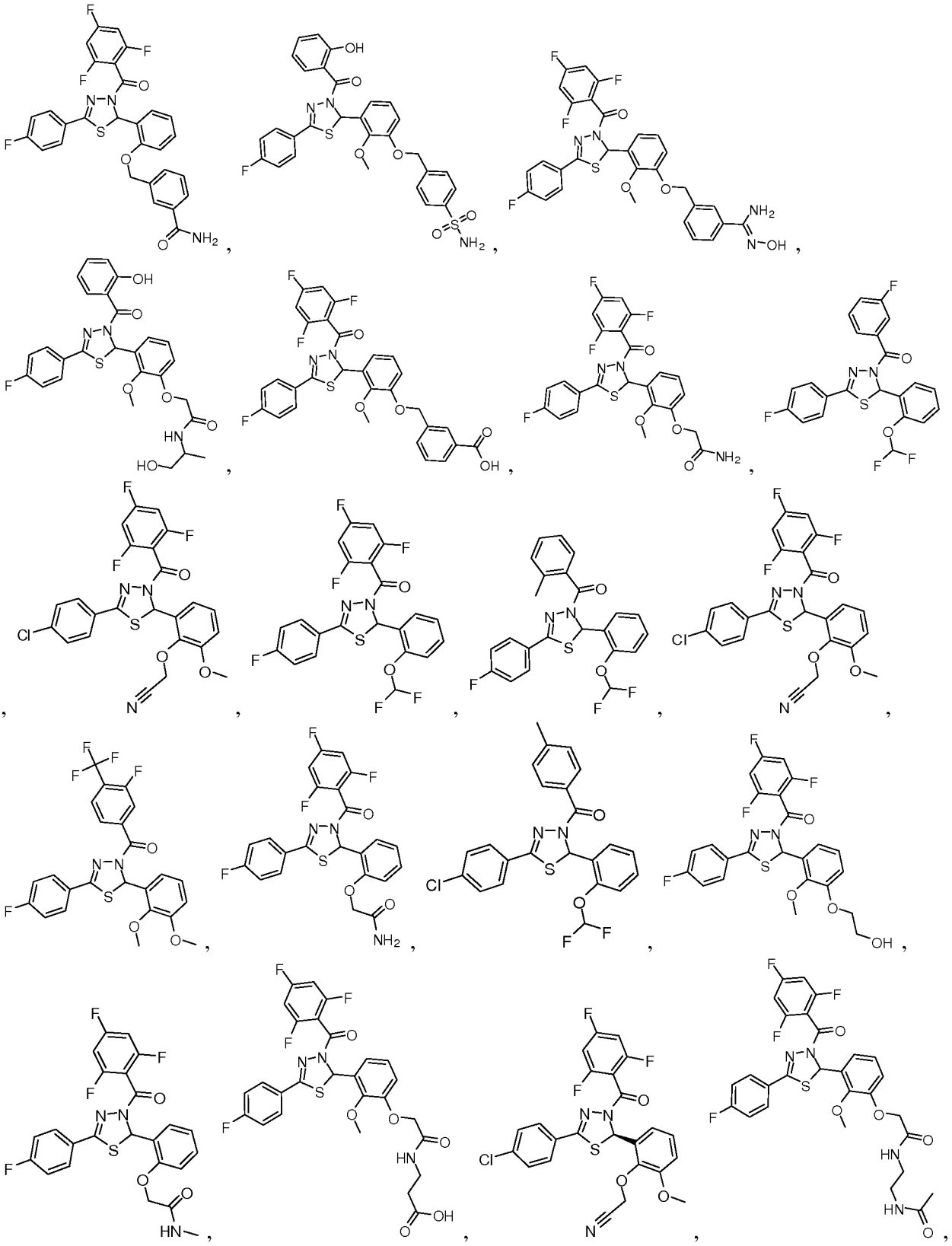
Claim 8. (Cancelled).

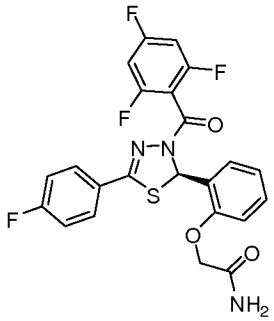
Claim 9. (Withdrawn) A method for treating a disease or disorder in an animal in which modulation of LXR activity can prevent, inhibit or ameliorate the pathology and/or symptomatology of the disease, which method comprises administering to the animal a therapeutically effective amount of a compound of Claim 1.

Claim 10. (Withdrawn) The method of claim 9 further comprising administering a therapeutically effective amount of a compound of Claim 1 in combination with another therapeutically relevant agent.

Claim 11. (New) The compound of claim1 selected from:



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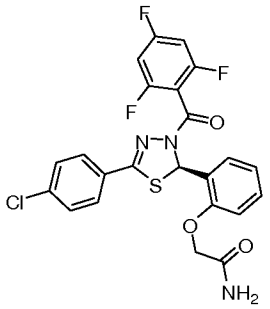
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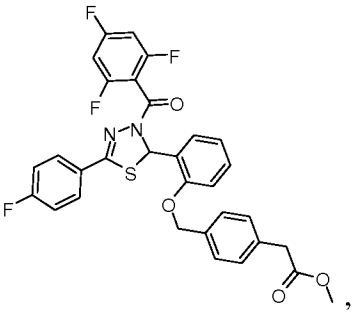
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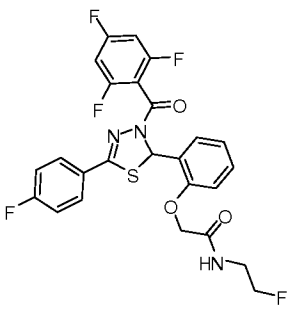
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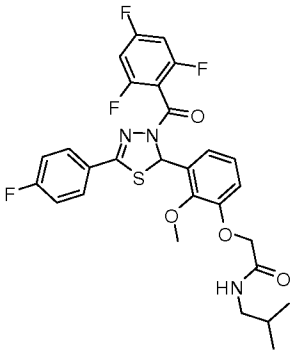
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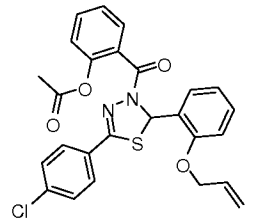
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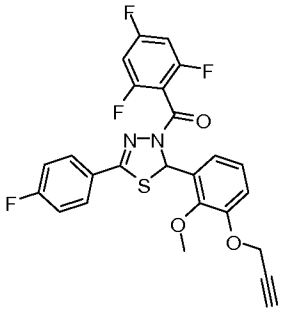
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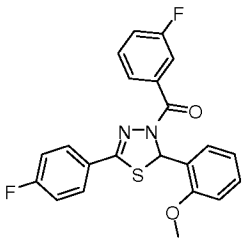
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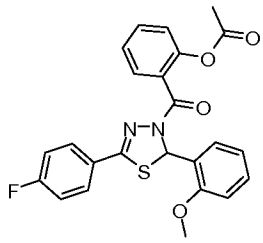
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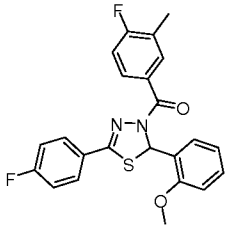
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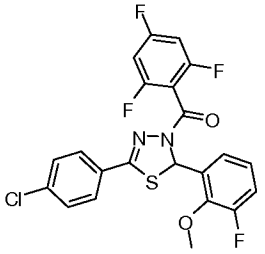
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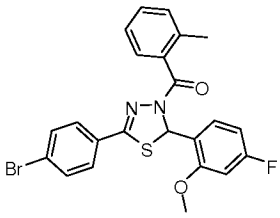
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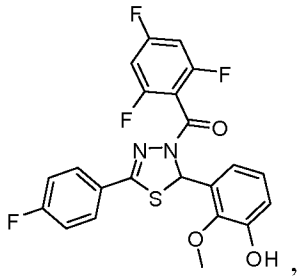
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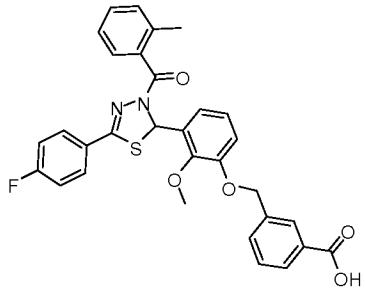
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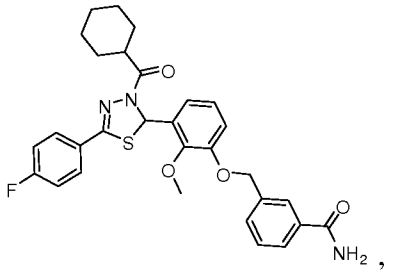
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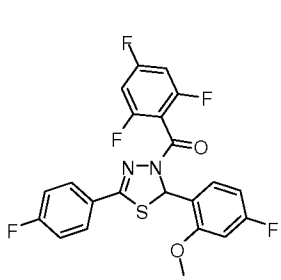
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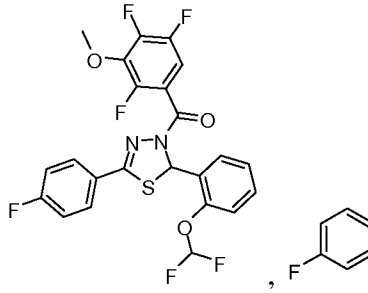
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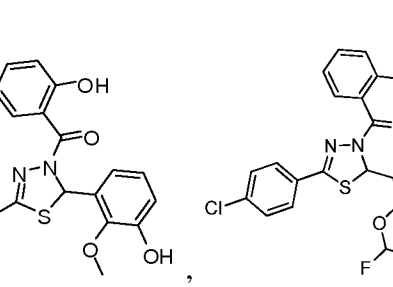
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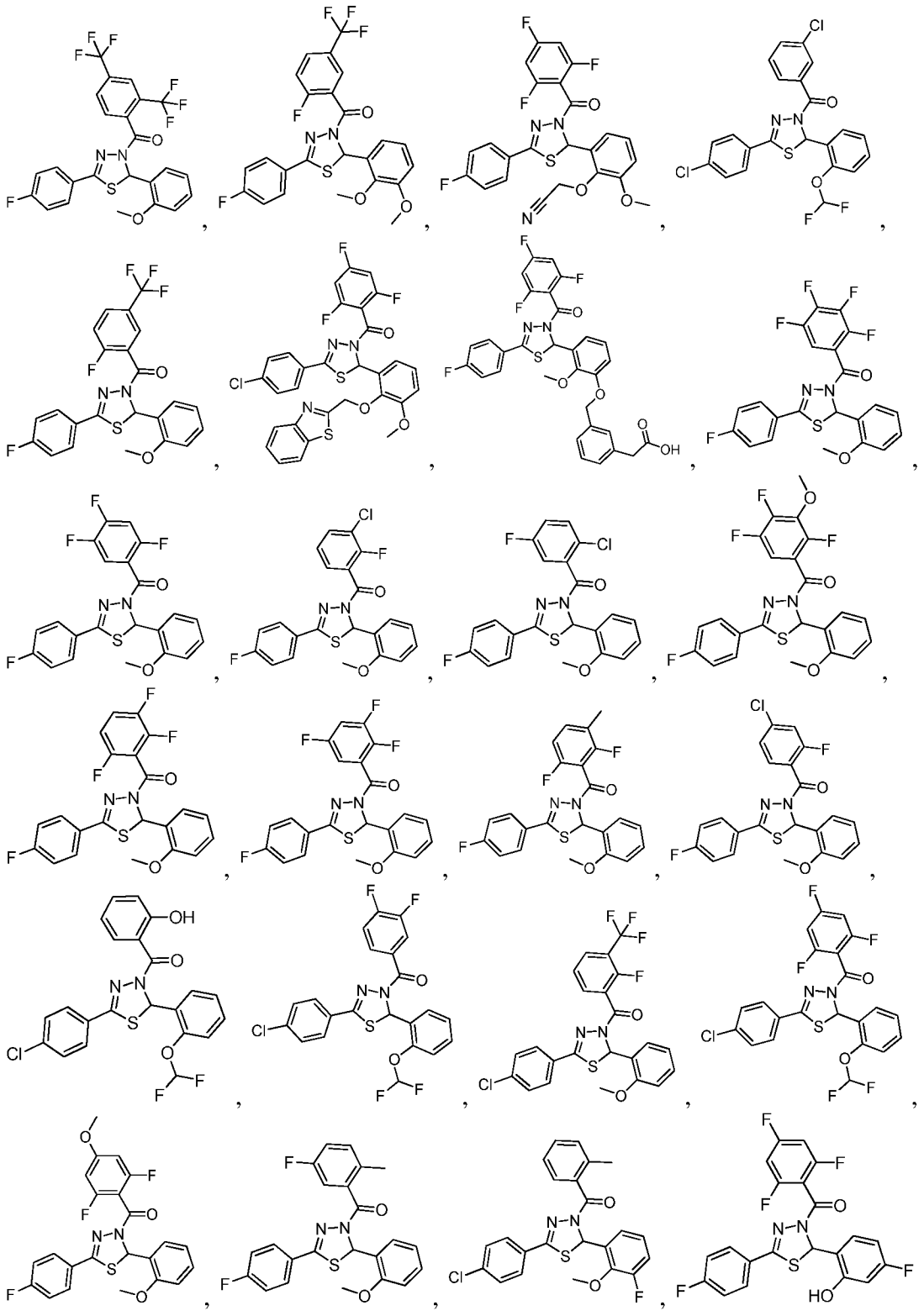

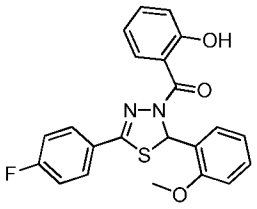
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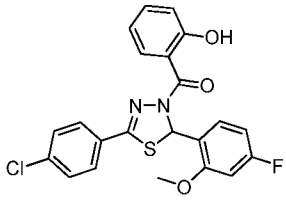
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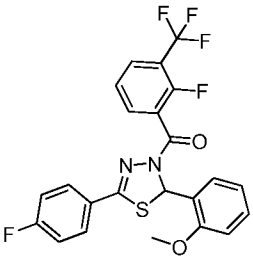
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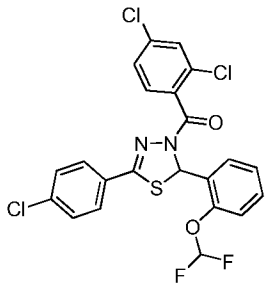
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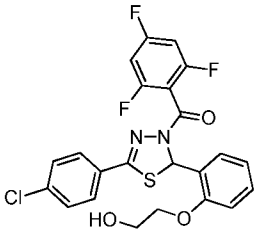
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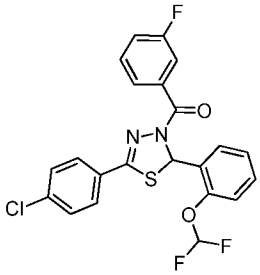
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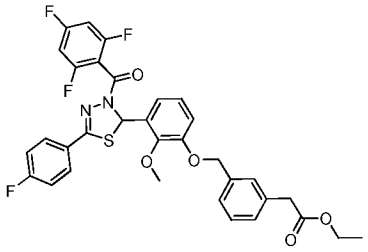
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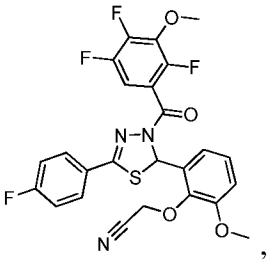
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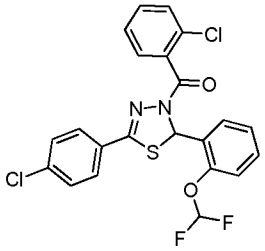
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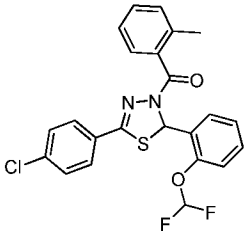
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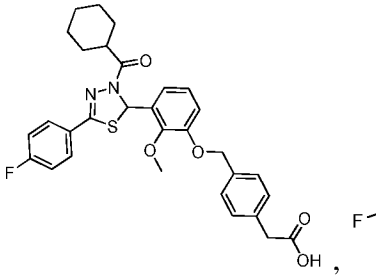
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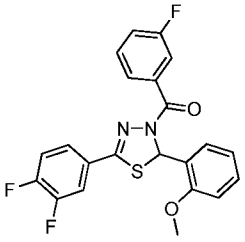
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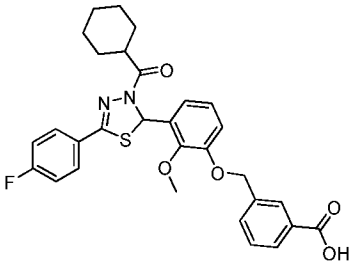
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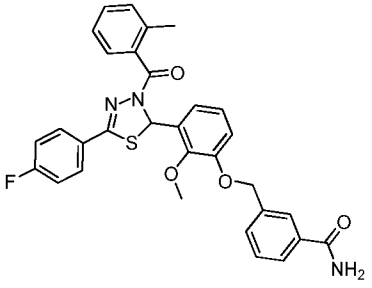
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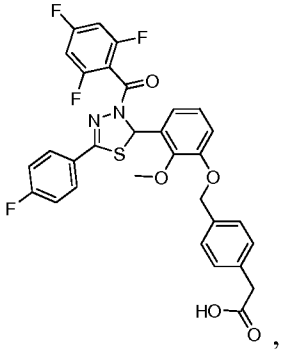
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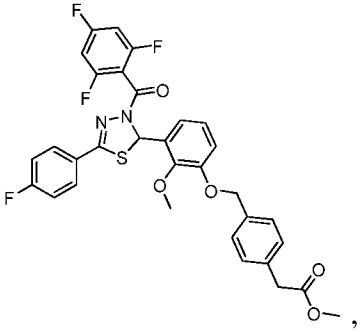
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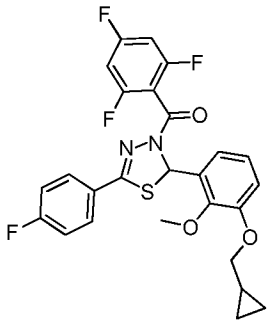
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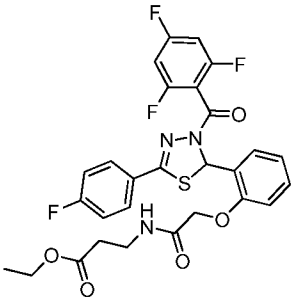
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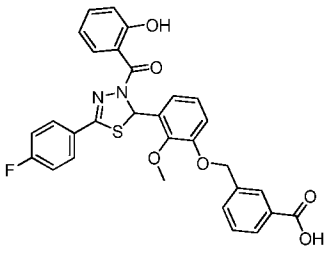
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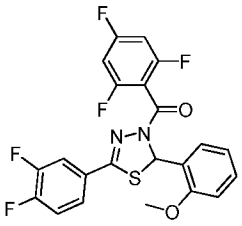
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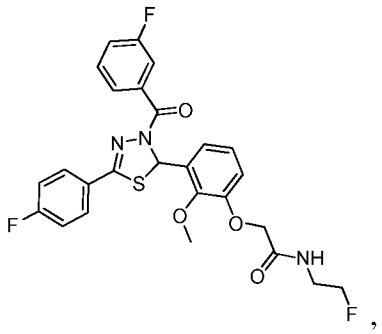
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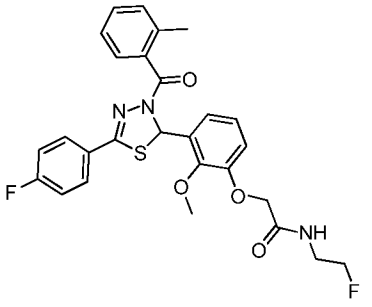
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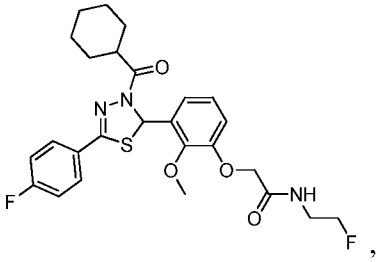
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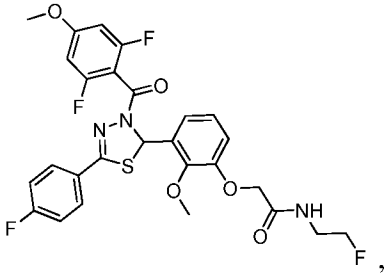
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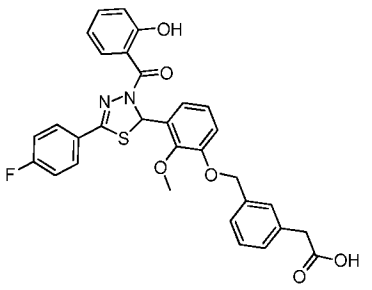
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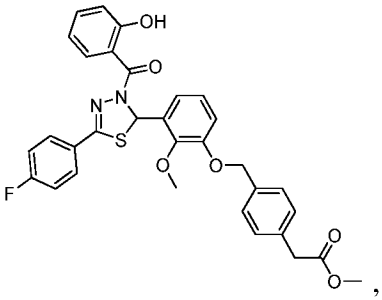
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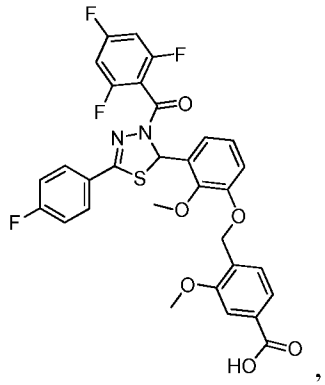
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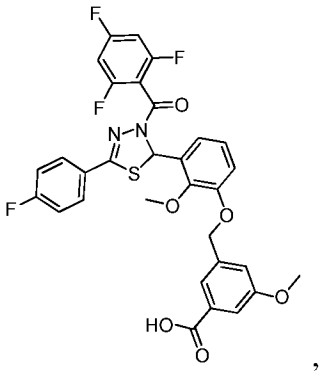
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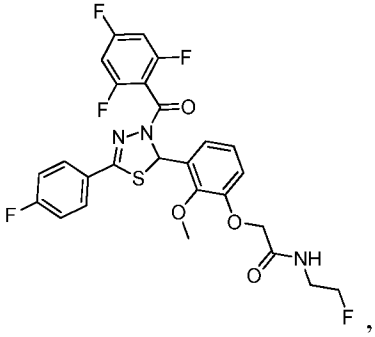
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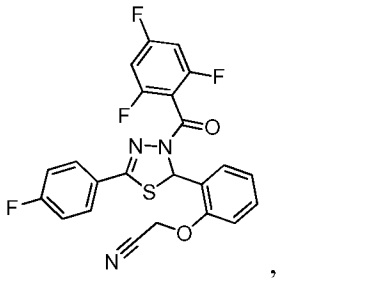
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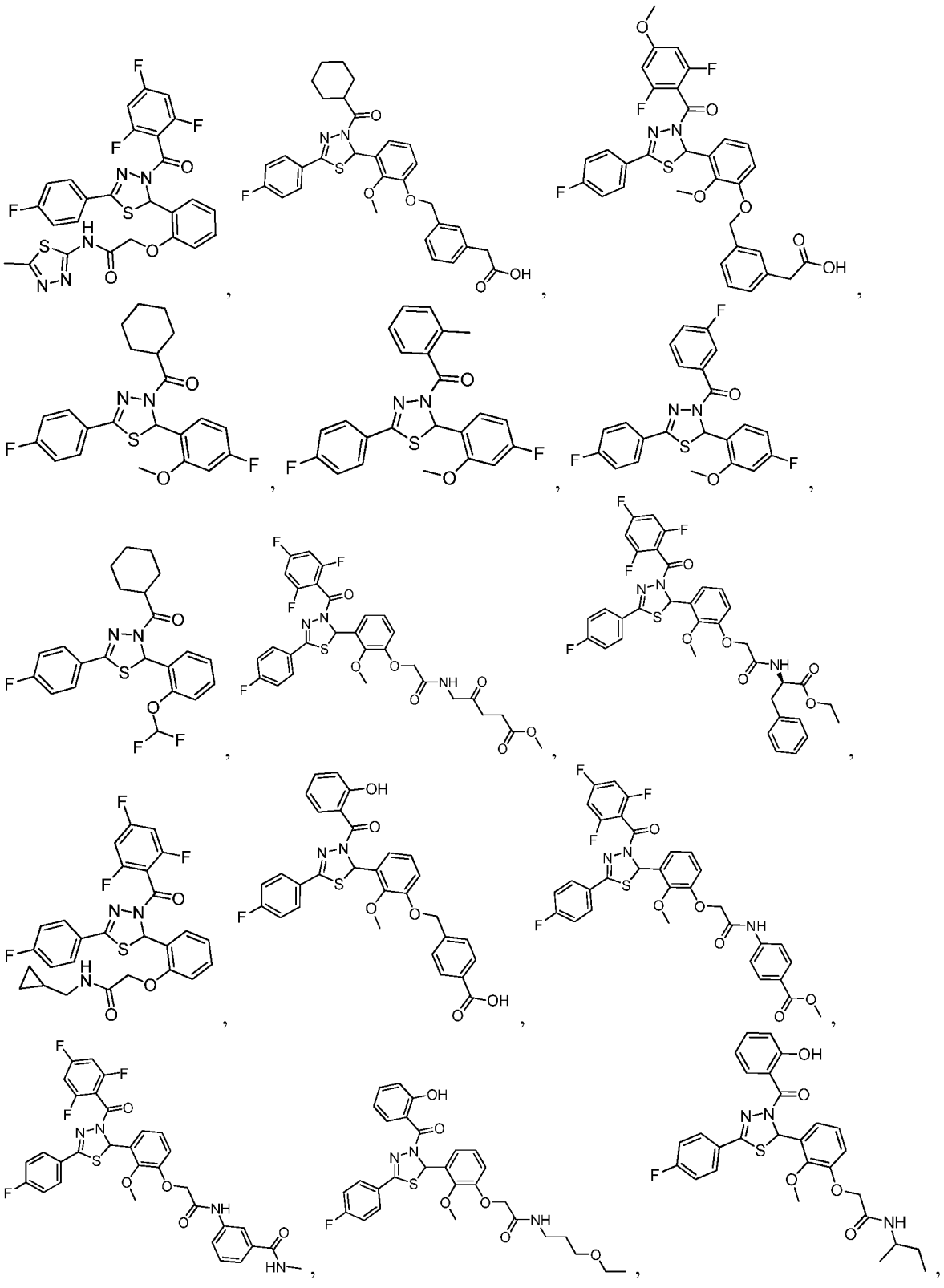

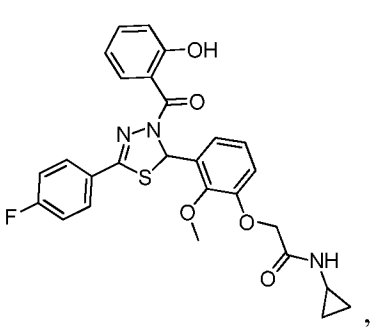
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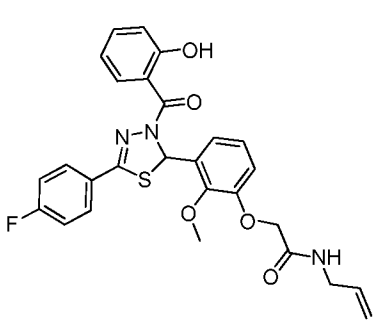
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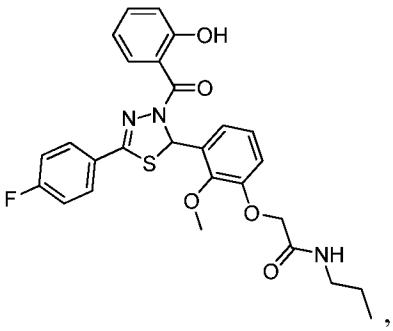
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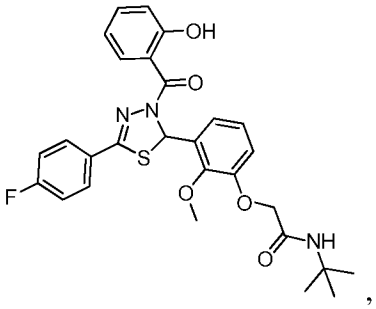
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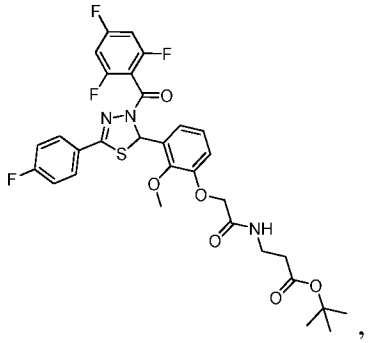
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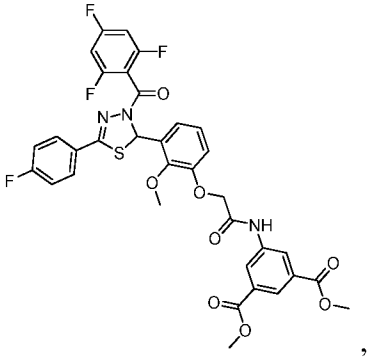
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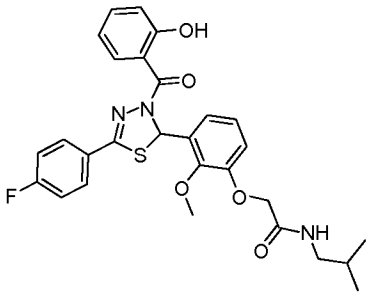
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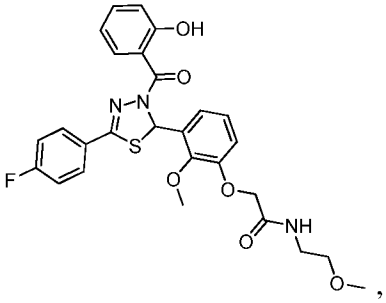
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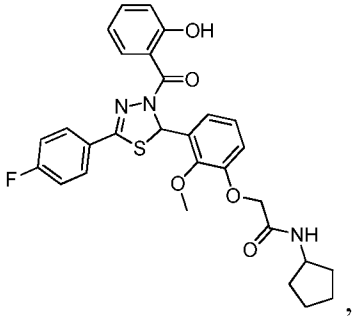
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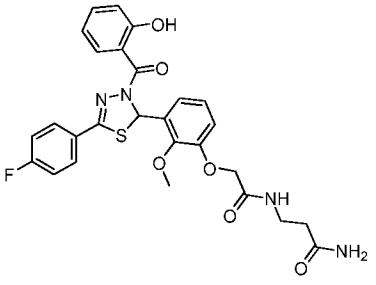
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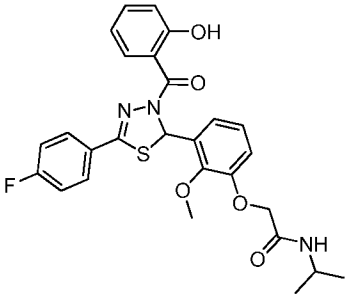
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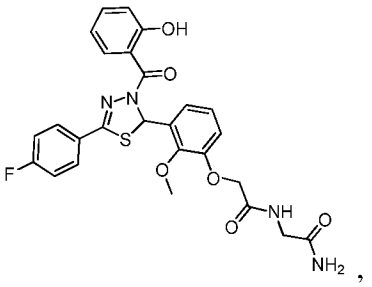
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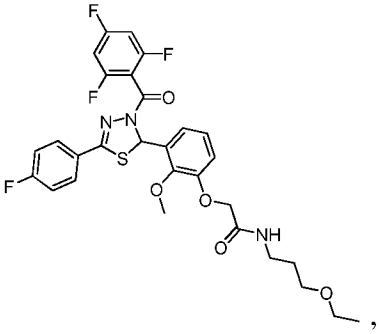
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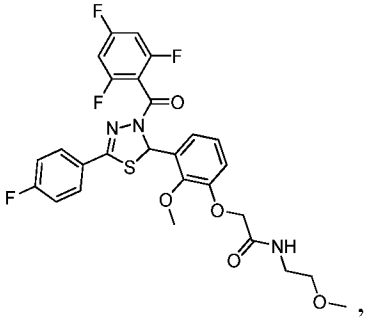
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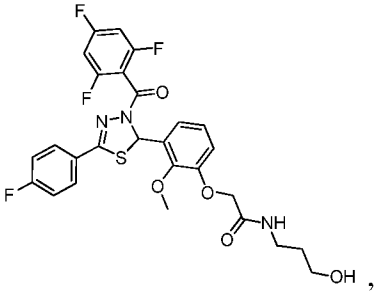
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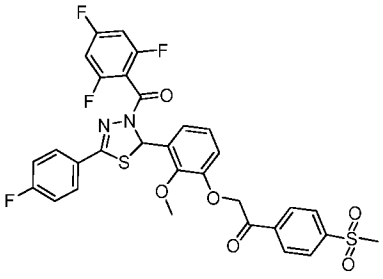
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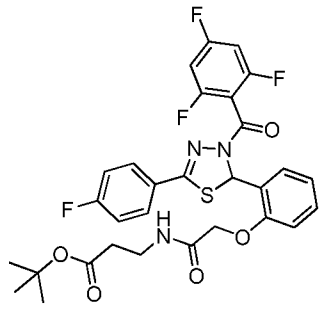
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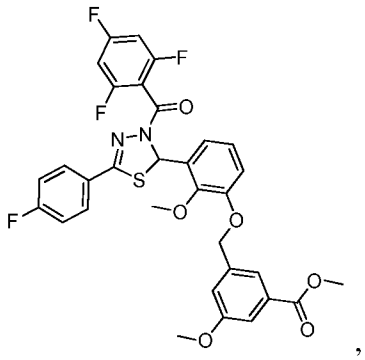
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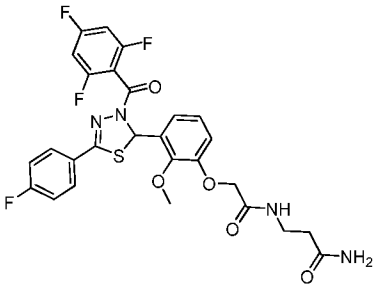
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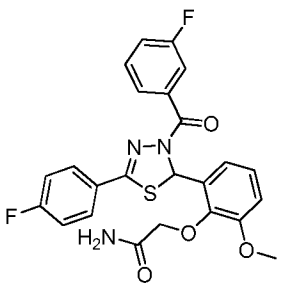
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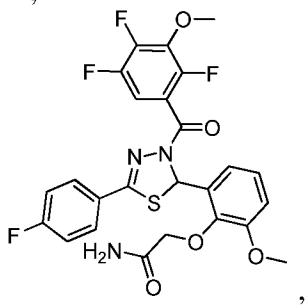
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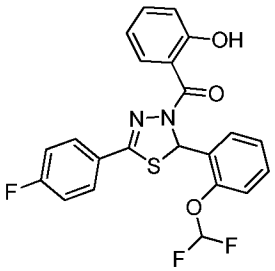
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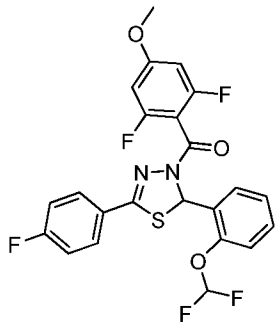
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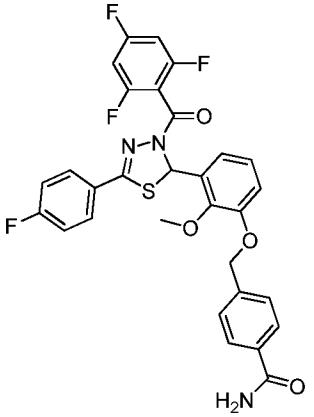
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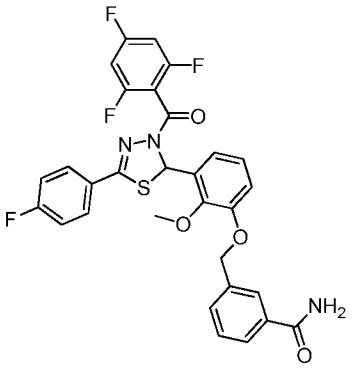
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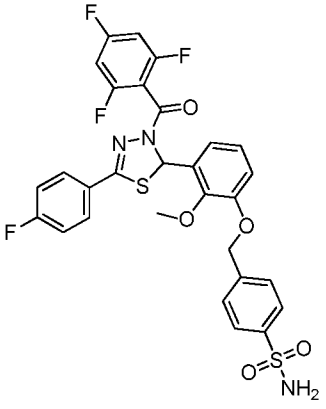
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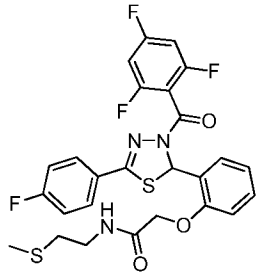
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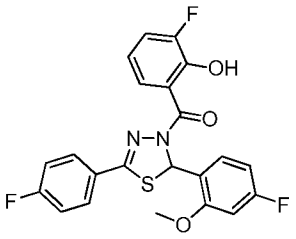
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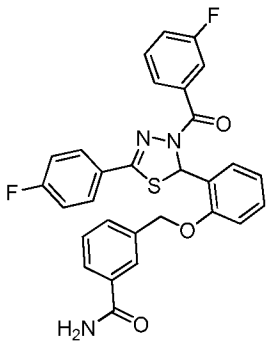
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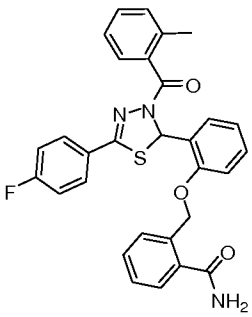
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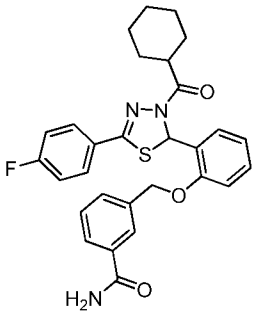
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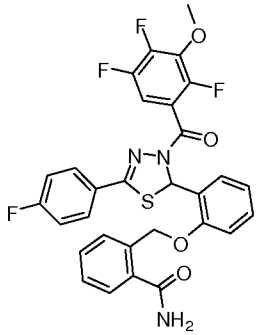
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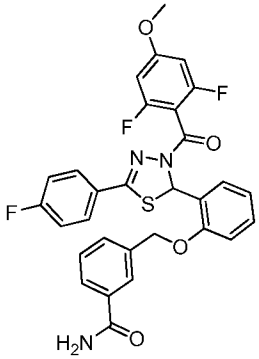
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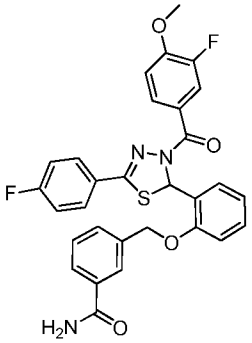
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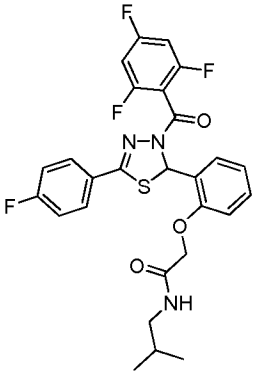
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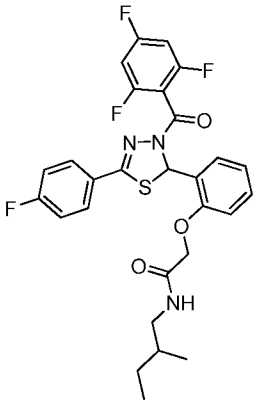
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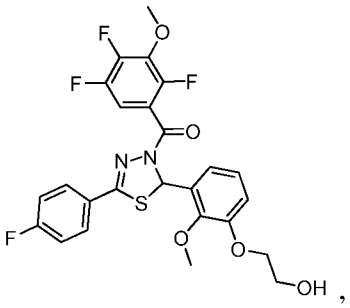
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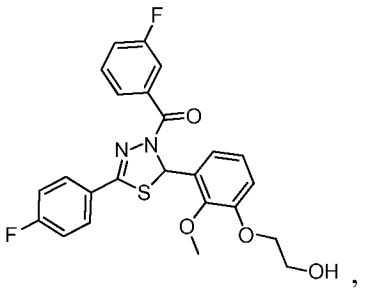
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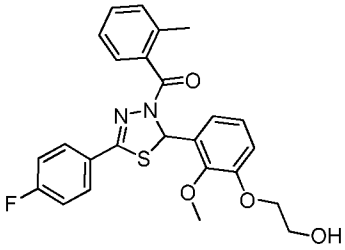
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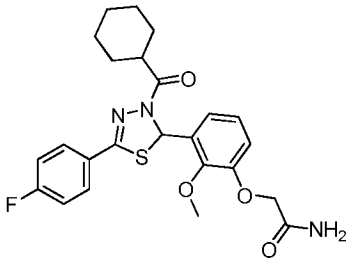
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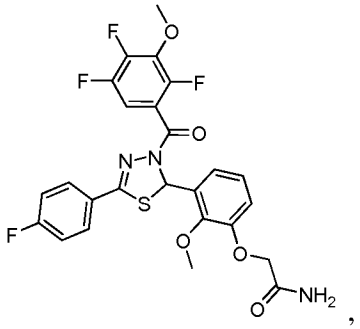
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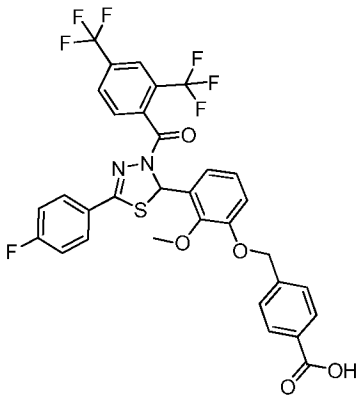
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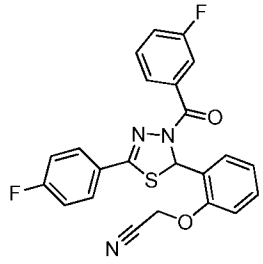
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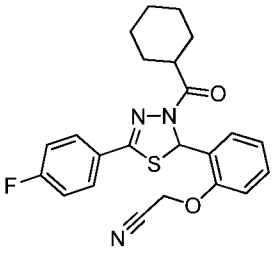
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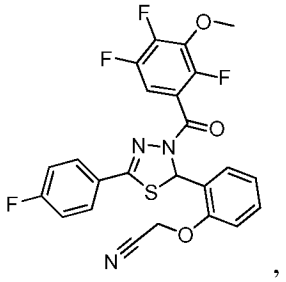
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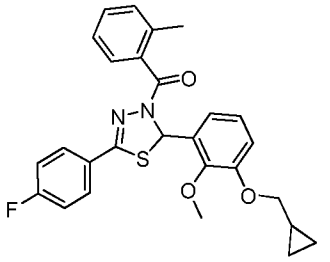
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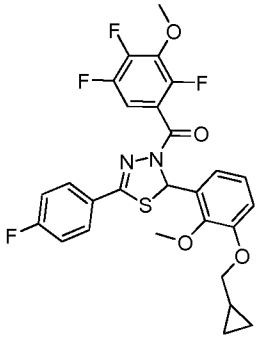
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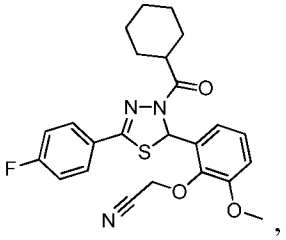
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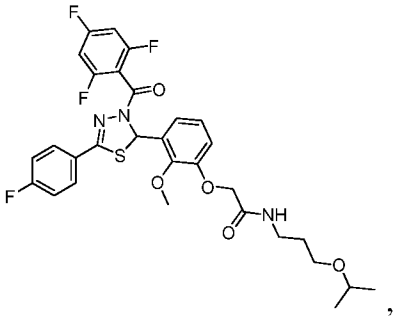
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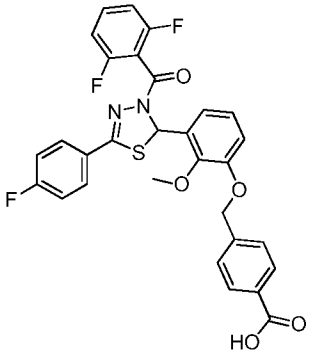
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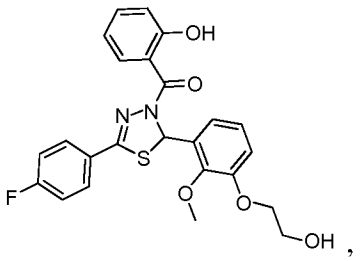
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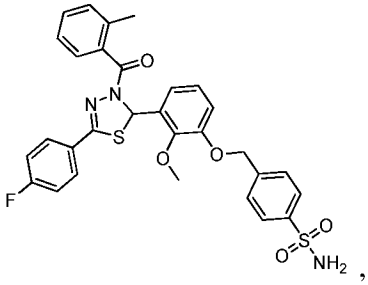
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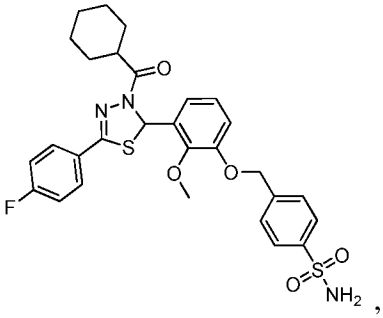
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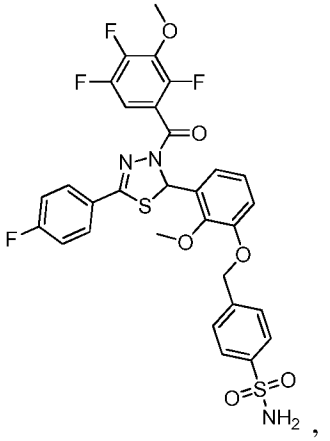
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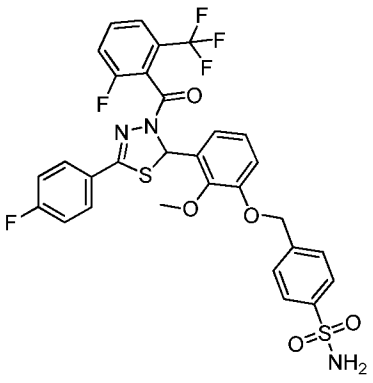
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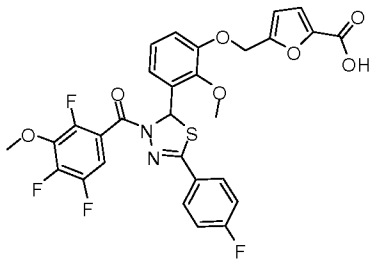
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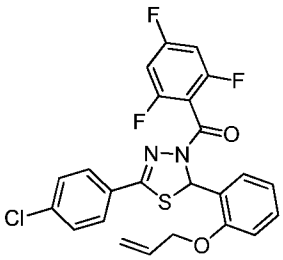
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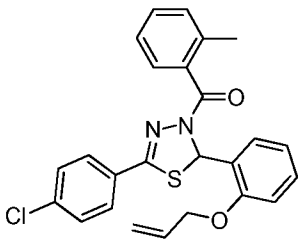
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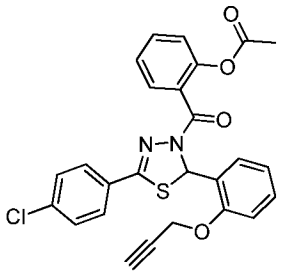
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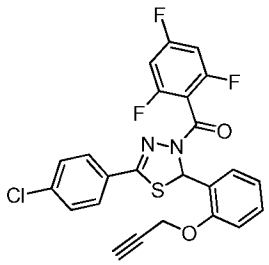
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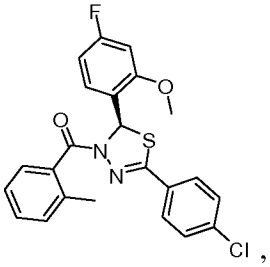
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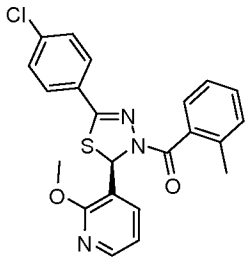
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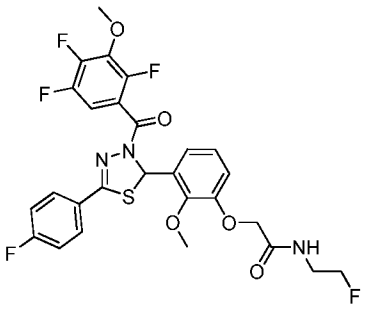
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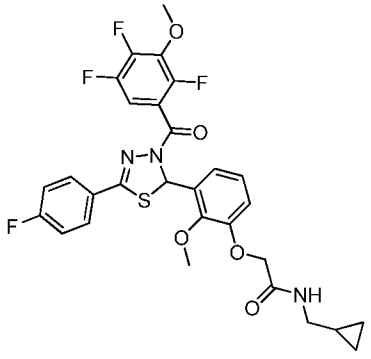
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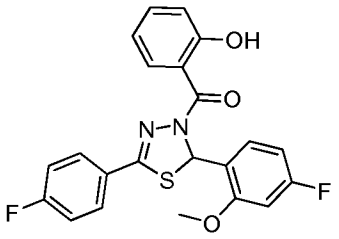
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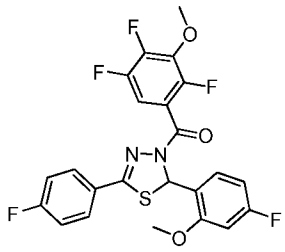
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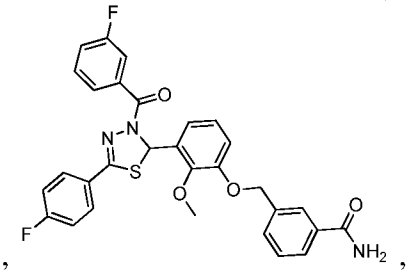
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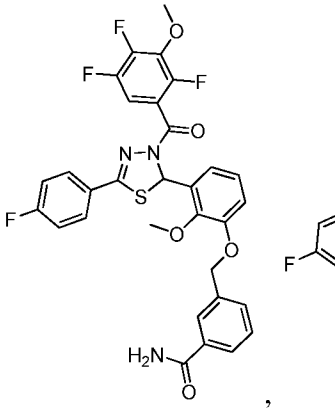
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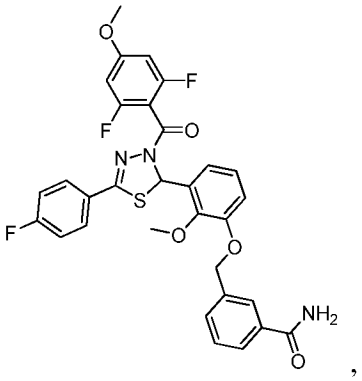
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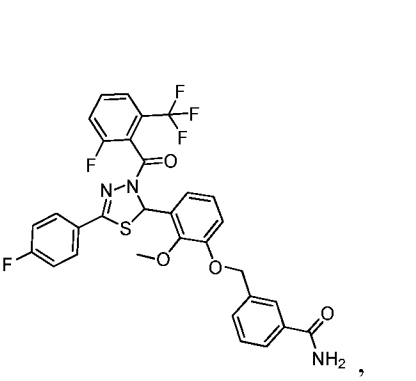
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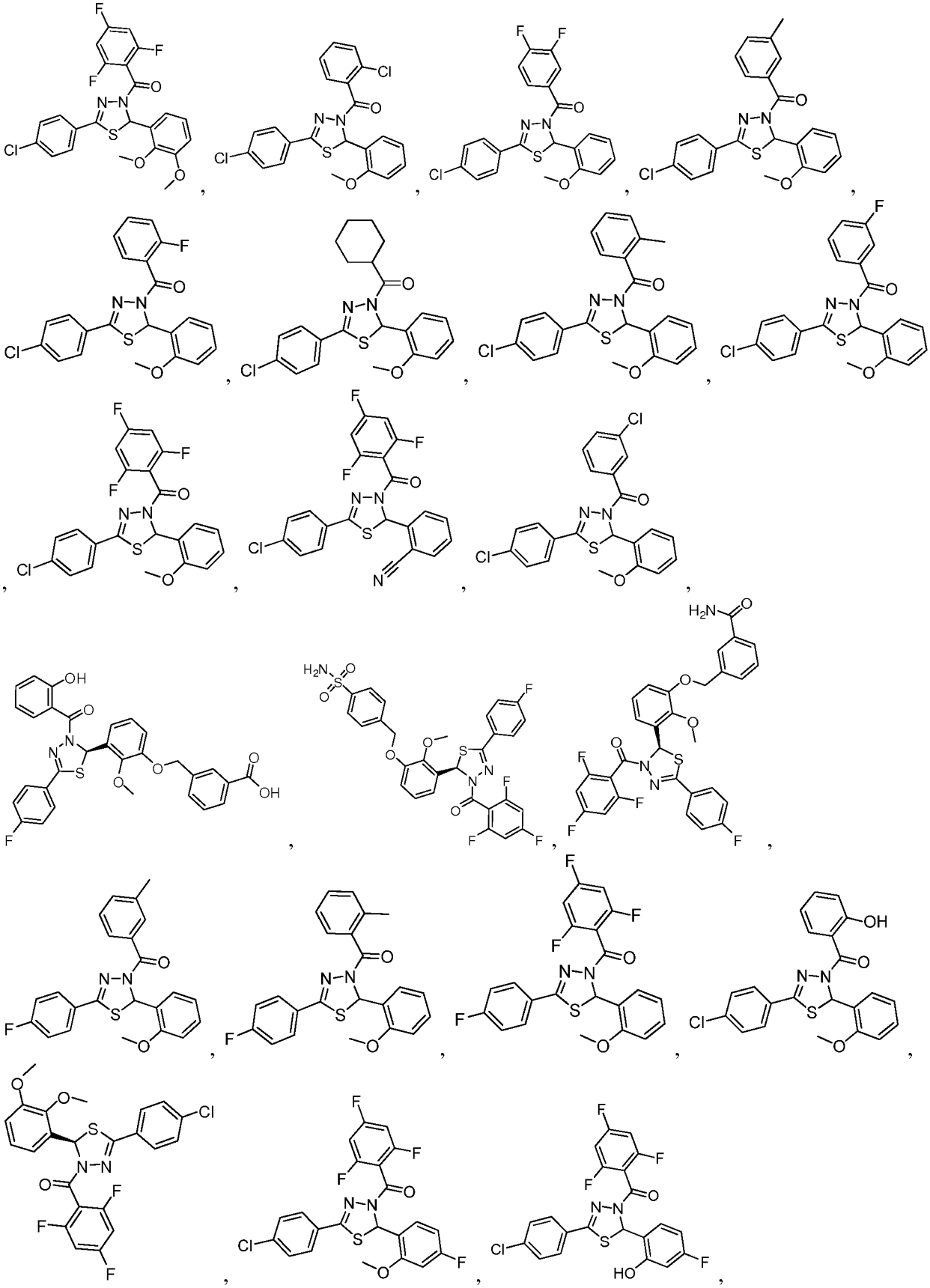

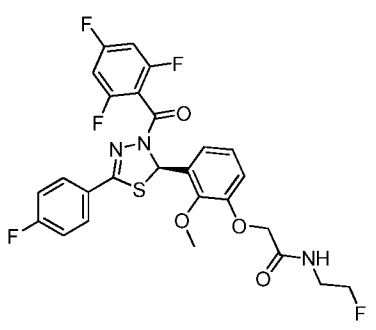
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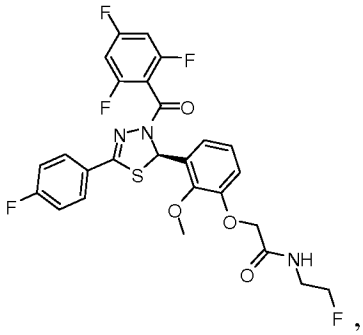
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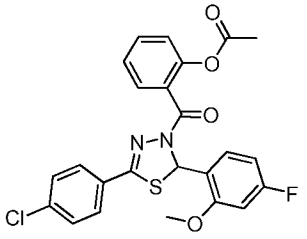
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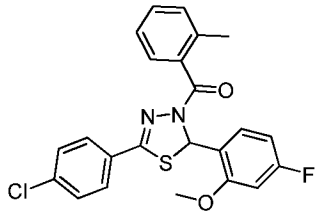
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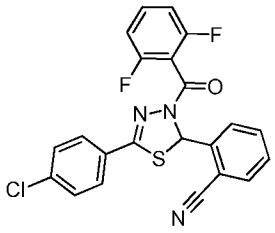
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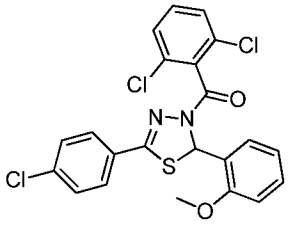
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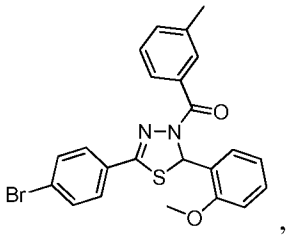
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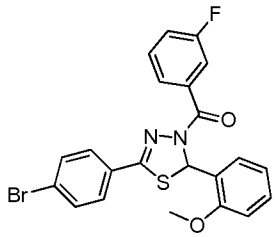
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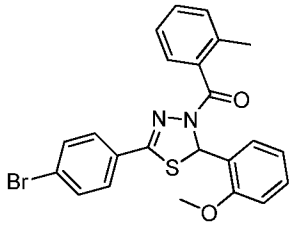
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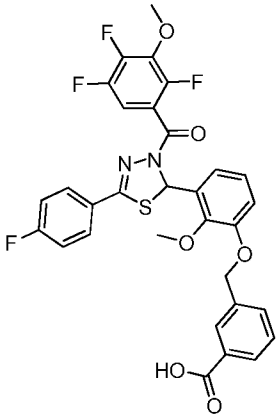
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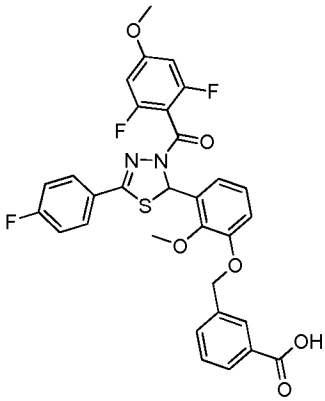
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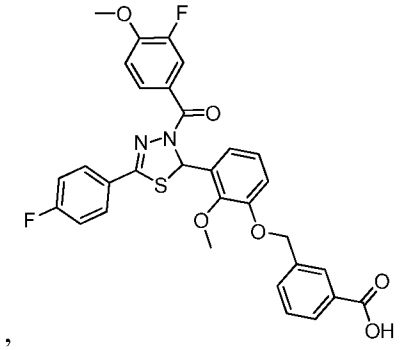
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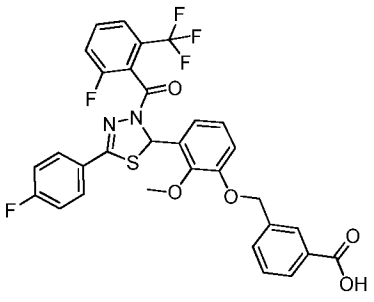
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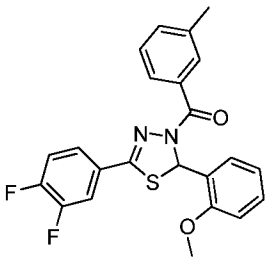
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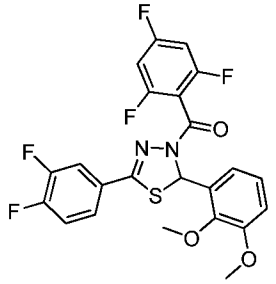
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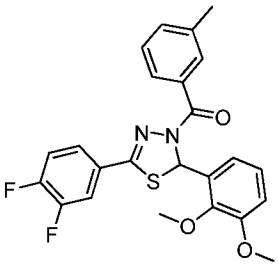
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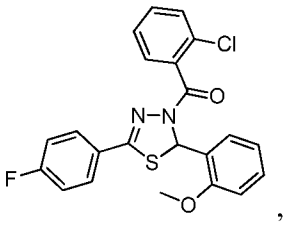
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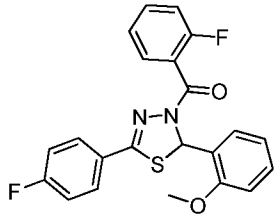
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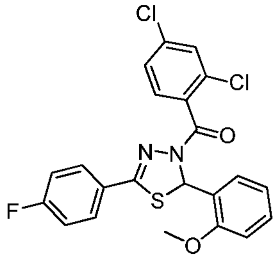
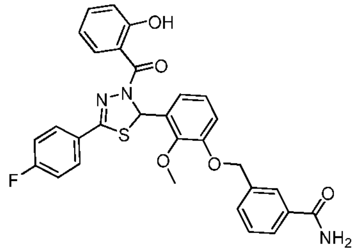
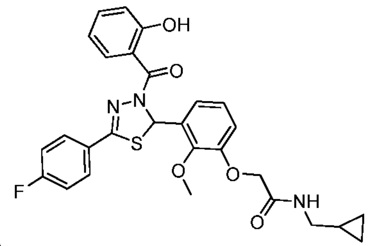
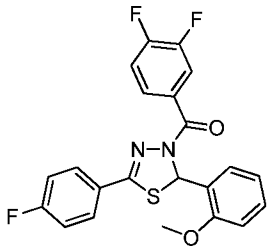
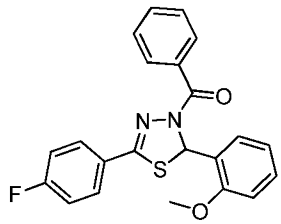
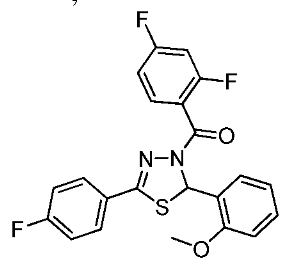
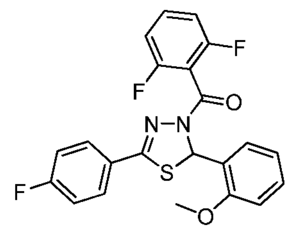
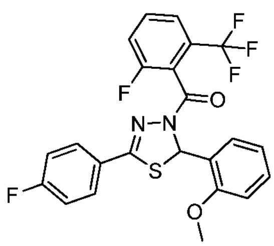
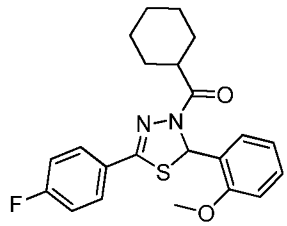
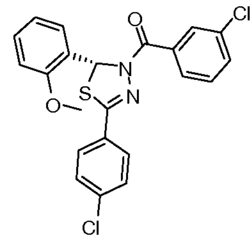
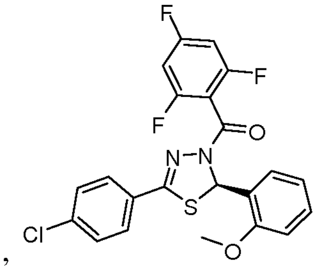
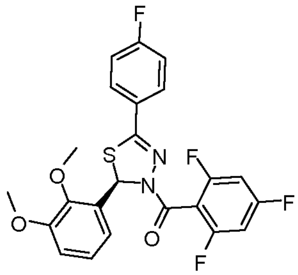
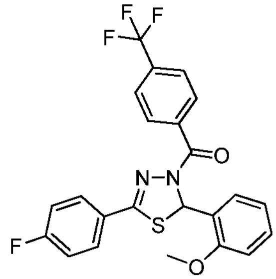
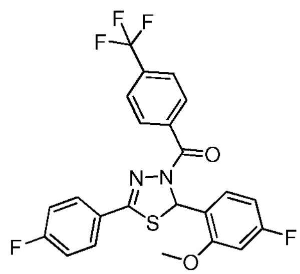
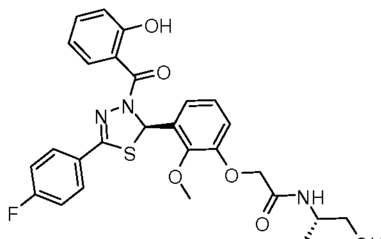
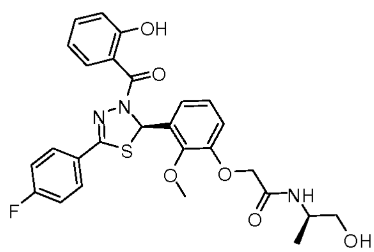
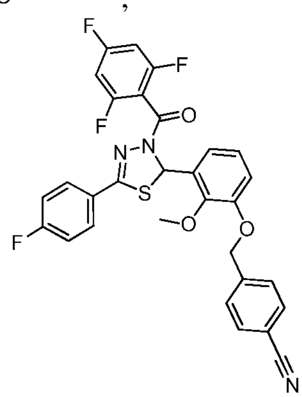
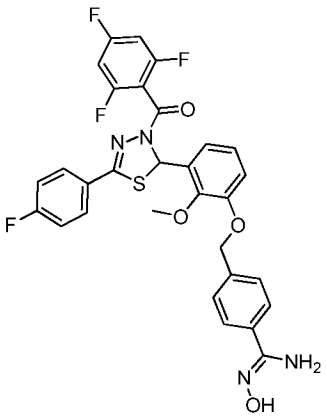
 ,  ,  ,

 ,  ,  ,  ,

 ,  ,  ,  ,

 ,  ,  ,

 ,  ,  ,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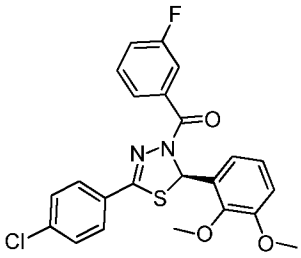
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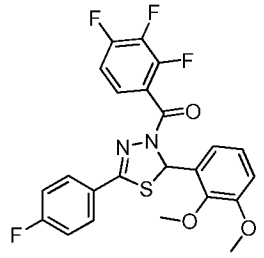
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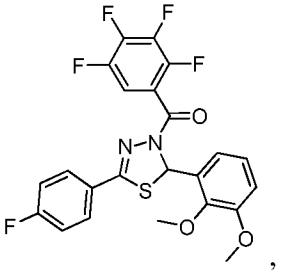
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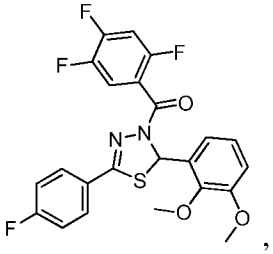
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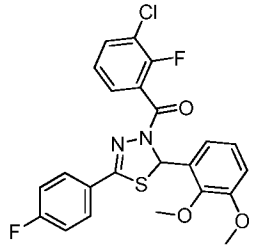
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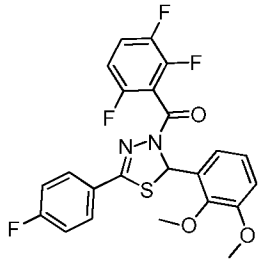
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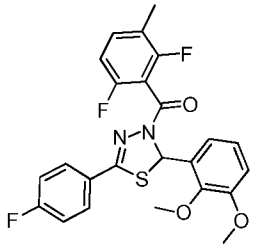
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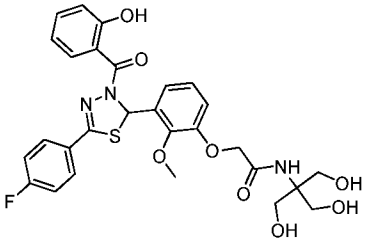
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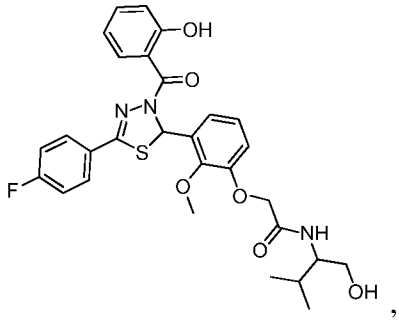
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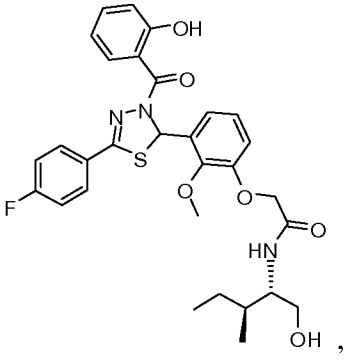
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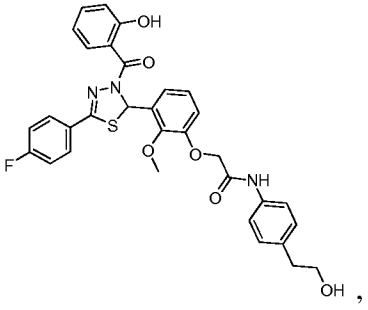
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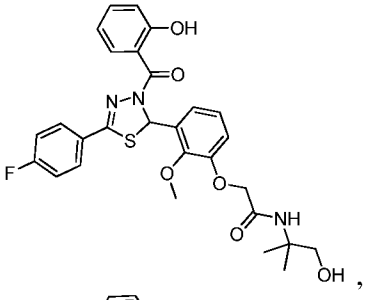
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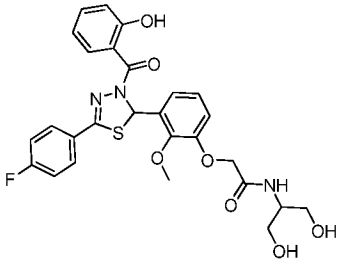
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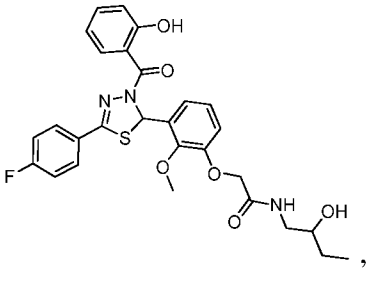
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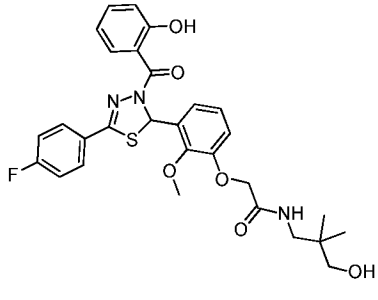
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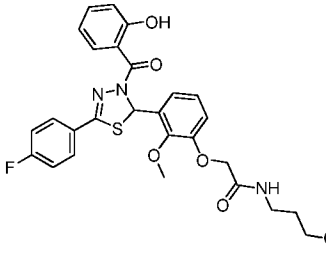
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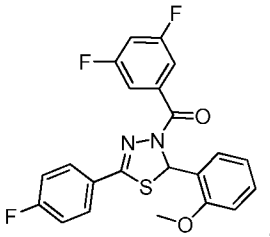
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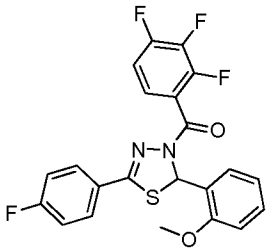
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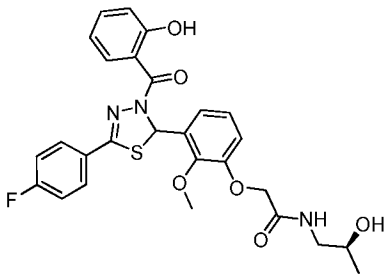
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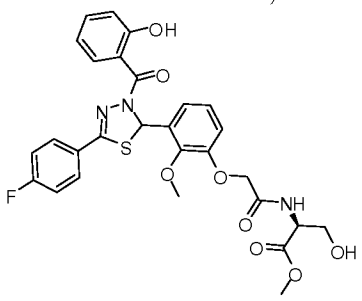
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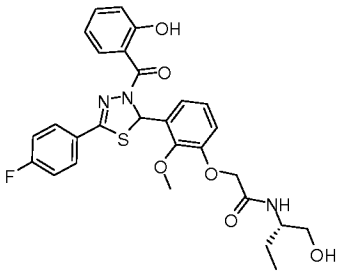
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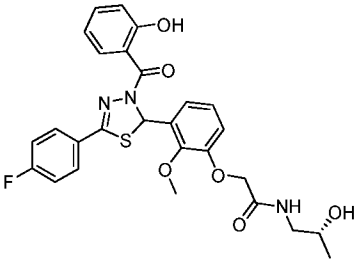
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